AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-16. (canceled).

17. (currently amended): A threading control method according to ~~claim 15~~ claim 25, wherein the mechanical error due to ~~individual~~ the difference ~~differences in threading machines~~ between the first machine and the second machine includes a component of the thread phase displacement, in accordance with ~~the~~ a feeding spindle feed rate of the feeding spindle.

18. (canceled).

19. (currently amended): A threading control method according to ~~claim 15~~ claim 25, wherein the mechanical error due to ~~individual~~ the difference ~~differences in threading machines~~ between the first machine and the second machine includes a constant component of the thread phase displacement, independent of ~~the~~ a feeding spindle feed rate of the feeding spindle.

20. (currently amended): A threading control method according to ~~claim 16~~ claim 17, wherein the mechanical error due to ~~individual~~ the difference ~~differences in threading machines~~ between the first machine and the second machine includes a constant component of the thread phase displacement, independent of ~~the~~ a feeding spindle feed rate of the feeding spindle.

21. (currently amended): A threading control method according to ~~claim 15~~ claim 23, wherein a component of the thread phase displacement, in accordance with ~~the~~ a feeding spindle feed rate of the feeding spindle, and a constant component of the thread phase displacement, independent of the feeding spindle feed rate are inputted as parameters, and the threading start timing is altered based on the ~~inputted~~ input parameters.

22. (canceled).

23. (currently amended): A threading control method for performing a threading operation on a workpiece by moving, in synchronization with rotation of a main spindle on which the workpiece is mounted, either a cutter or ~~a~~ the workpiece in a feeding spindle direction which is a central axis direction of the workpiece rotated by the main spindle, the method comprising:

~~a step of~~ outputting a thread-pitch command value and a programmed main-spindle rotation frequency by ~~means of~~ using a machining program[[,]];

~~a step of~~ calculating a first servo feed rate of a feeding spindle that controls the cutter based on the thread-pitch command value and the programmed main-spindle rotation frequency[[,]];

~~a step of~~ calculating a second servo feed rate of the feeding spindle based on the thread-pitch command value, the programmed main-spindle rotation frequency, and a main-spindle override value ~~input from outside~~ received from an external source[[,]];

~~a step of~~ calculating, when the workpiece is threaded either at a second feed rate different from a previous first feed rate, or on a second machine different from a previously used first machine, a main-spindle ~~threading-start~~ threading-start timing shift based on the first servo feed rate, the second servo feed rate, and a servo-spindle acceleration time-constant ~~for~~ of the feeding spindle ~~in a situation in which the identical workpiece is threaded either at a feed rate different from a previous feed rate, or on a machine different from a previously used machine~~[[,]]; and

~~a step of~~ altering ~~the~~ a threading-start timing to thread the workpiece based on ~~by~~ the calculated main-spindle ~~threading-start~~ threading-start timing shift.

24. (canceled).

25. (currently amended): A threading control method according to claim 23, wherein when the workpiece is threaded on the second machine different from the previously used first

machine, the threading start timing is altered based on a mechanical error due to ~~individual differences in~~ a difference between the ~~threading machines~~first machine and the second machine.

26-30. (canceled).

31. (currently amended): A threading control system according to ~~claim 29~~ claim 39, wherein the mechanical error due to ~~individual~~ the difference ~~differences in threading machines~~ between the first machine and the second machine includes a component of the thread phase displacement, in accordance with ~~the~~ a feeding spindle feed rate of the feeding spindle.

32. (canceled).

33. (currently amended): A threading control system according to ~~claim 29~~ claim 39, wherein the mechanical error due to ~~individual~~ the difference ~~differences in threading machines~~ between the first machine and the second machine includes a constant component of the thread phase displacement, independent of ~~the~~ a feeding spindle feed rate of the feeding spindle.

34. (currently amended): A threading control system according to ~~claim 30~~ claim 31, wherein the mechanical error due to ~~individual~~ the difference ~~differences in threading machines~~

between the first machine and the second machine includes a constant component of the thread phase displacement, independent of ~~the~~ a feeding spindle feed rate of the feeding spindle.

35. (currently amended): A threading control system according to ~~claim 29~~ claim 37, wherein the main-spindle angle computing section alters the threading start timing based on a variable component of the thread phase displacement, in accordance with ~~the~~ a feeding spindle feed rate of the feeding spindle, and based on a constant component of the thread phase displacement, independent of the feeding spindle feed rate, which ~~have been~~ are ~~inputted~~ input as parameters.

36. (canceled).

37. (currently amended): A threading control system for performing a threading operation on a workpiece by moving, in synchronization with rotation of a main spindle on which the workpiece is mounted, either a cutter or ~~a~~ the workpiece in a feeding spindle direction which is a central axis direction of the workpiece rotated by the main spindle, the system comprising:

a machining program analyzing section ~~outputting~~ which outputs a thread-pitch command value and a programmed main-spindle rotation frequency ~~by means of a machining program~~[[,]];

a threading computing section which receives the thread-pitch command value and the programmed main-spindle rotation frequency output by the machining program analyzing

section, and which calculates ~~calculating~~ a first servo feed rate of a feeding spindle that controls the cutter based on the received thread-pitch command value and the programmed main-spindle rotation frequency, and ~~calculating~~ which calculates a second servo feed rate of the feeding spindle based on the thread-pitch command value, ~~and~~ the programmed main-spindle rotation frequency, and ~~a~~ an override input ~~from outside~~received from an external source[[,]]; and

~~a machining program analyzing section outputting a thread pitch command value and a programmed main spindle rotation frequency based on a machining program.~~

~~a threading computing section calculating a first servo feed rate based on the thread pitch command value and the programmed main spindle rotation frequency,~~

~~and calculating a second servo feed rate based on the thread pitch command value and the programmed main spindle rotation frequency and a override input from outside,~~

a main-spindle angle computing section ~~calculating a first servo feed rate and a second servo feed rate according to thread pitch command value and programmed main spindle rotation frequency, and calculating~~ which calculates, when the workpiece is threaded either at a second feed rate different from a previous first feed rate, or on a second machine different from a previously used first machine, a main-spindle ~~threading start~~ threading-start timing shift based on the first servo feed rate, the second servo feed rate, and a servo-spindle acceleration time-constant ~~for~~ of the feeding spindle ~~in a situation in which the identical workpiece is threaded either at a feed rate different from a previous feed rate, or on a machine different from a previously used machine~~, and ~~altering~~ which alters ~~the~~ a threading-start timing to thread the workpiece ~~by~~ based on the calculated main-spindle threading-start timing shift.

38. (canceled).

39. (currently amended): A threading control system according to claim 37, wherein, when the workpiece is threaded on the second machine different from the previously used first machine, the threading start timing is altered based on a mechanical error due to a difference ~~individual differences in~~ between the ~~threading machines~~first machine and the second machine.

40. (canceled).

41. (new): The threading control method of claim 23, wherein the servo-spindle acceleration time constant represents a time for the cutter to reach the first servo feed rate from a current feed rate of the cutter, and wherein the servo-spindle acceleration time constant is selected from a plurality of prestored servo-spindle acceleration time constants based on at least the first servo feed rate and the current feed rate of the cutter.

42. (new): The threading control system of claim 37, wherein the servo-spindle acceleration time constant represents a time for the cutter to reach the first servo feed rate from a current feed rate of the cutter, wherein the first servo feed rate is determined based on an input command, and wherein the main-spindle angle computing section selects the servo-spindle

acceleration time constant from a plurality of prestored servo-spindle acceleration time constants based on at least the first servo feed rate and the current feed rate of the cutter.